

## ABSTRACT OF THE DISCLOSURE

1 A two-dimensional field of regard is scanned with a single plane mirror in the  
2 object space of a telescope, maintaining a fixed relationship between the rotational  
3 direction of scan and the projection of the telescope's focal plane. The two dimensional  
4 field of regard is covered by a series of conical arcs, each arc being scanned by rotation at  
5 constant angular velocity about the inner axis of the two-axis system. This scanning  
6 system accommodates applications such as TDI that require an opto-mechanical scan with  
7 a constant linear velocity (magnitude and direction) in the focal plane. Shading of IR  
8 images is mitigated by calibration at the ends of each scan line and by a scan geometry  
9 that minimizes changes in reflection angle.